

REMARKS

Claims 1-5 are all the claims pending in the application. Claims 2-5 are withdrawn from consideration as being drawn to a non-elected invention. Claim 1 presently stands rejected.

Claim 1 is rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 43-14120 in view of newly cited Nakane et al. ('493) and newly cited Brown et al. ('962).

Analysis

The Final Rejection asserts that it would have been obvious to modify JP '120 to utilize a method including first and second punch rollers having the asymmetrical shapes recited in claim 1, in view of the teachings of Nakane and Brown. The alleged motivation (page 3 of Final Office Action) for this modification is that "such a modification would only depend on the desired shape(s) of the groove(s) to be formed and such a combination would yield predictable results."

Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness. To establish a case of *prima facie* obviousness, three basic criteria must be met. MPEP § 706.02(j).

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, a *prima facie* case of obviousness requires that there would have been a reasonable expectation of success. Third, the prior art must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and reasonable expectation of success must be found in the prior art and not based on Applicant's own disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 11438 (Fed. Cir. 1991).

With respect to the **first requirement**, the mere fact that references can be combined or modified is not *prima facie* obviousness. Although a prior art reference can be modified to run the way an apparatus is claimed, there must be a suggestion or motivation in the reference to do so. There must be some objective reason to combine the teachings of the references, beyond a statement that the modifications would have been well within the ordinary skill of the art. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993). Applicants submit that one would not have been motivated to combine the references as suggested by the Examiner because one could not reconcile the desired arcuate profile of the groove in JP '120 with the asymmetrical groove of Nakane and Brown as explained below.

JP '120 is directed to gas canisters and thus not concerned with the shape found in headrest stays. This reference uses press rollers to form the curved end plates b, and there is no motivation for changing the arcuate shape to the asymmetrical shape found in a headrest stay such as that in Nakane. One would not have been motivated to modify JP '120 to use asymmetrical rollers because this would change the arcuate profile of the groove in JP '120.

Each of the references teaches distinctly different approaches in establishing a groove. Moreover, the subject element receiving the groove is distinctly different in JP '120 from the other references. The mere fact that Applicant's invention can be reconstructed and explained by combining the separate types of rollers in each of the cited references does not supply sufficient impetus to have led one of ordinary skill in the art to combine the references to make the claimed invention. There is no motivation for providing the shape of the punches of Nakane and Brown into JP '120 since JP '120 is directed to a completely different apparatus and no benefit would be served by the different shaped punch.

Applicants submit that the **second requirement** of a reasonable expectation of success is not met either. The Office Action states that the “combination would yield predictable results”. However, there is no evidence that combining the different asymmetrical punch rollers would yield any desired result for JP ‘120. As noted previously, JP ‘120 is directed to gas canisters. JP ‘120 is not concerned with forming stays. In fact, JP ‘120 may be considered to teach away from the shape of a head rest stay since this reference is primarily concerned with forming a pair of curved end plates rather than stays in a pipe and forming these end plates with asymmetrical rollers may cause the end plates to be formed in a non-desirable shape.

More specifically, JP ‘120 is directed to a body of a gas canister and the desired shape of the grooves for the gas canister is arcuate, i.e., curved end plates b. The use of three rollers having incrementally reduced radius of curvatures is specifically desired in order to prevent a rapid increase in pressure during plastic forming by press processing the tube walls 4. Thereby, the specific roller shapes of JP ‘120 are provided to suppress a generation of extreme distortion stress, while obtaining a curved shape for the end plates.

There is simply no expectation of any advantage to be gained by modifying JP ‘120 in the alleged manner. There is no reason why one of ordinary skill in the art would desire to change the shape of the arcuate groove to an asymmetrical groove for the gas canister. There is no explanation of what “predictable result” would be yielded from this change in shape; to the contrary, it appears that any result from such a modification would be undesirable since it would alter the smooth, even shape of the canisters and provide no advantage or benefit in return.

In view of the foregoing, one of ordinary skill in the art would not have been motivated to modify JP ‘120 in view of Nakane and Brown and claim 1 should be found patentable.

In addition to the foregoing, Applicants also amend claim 1 to clarify that the punch rollers rotate during press working. This feature is fully supported by FIG. 1, and page 18, line 15 to page 20, line 12. As discussed in the specification, this feature of rotatingly pressing the punch rollers to the stay portion provides criticality to the invention because it reduces cracks and deformations.

In JP '120, the press working is divided into a plurality steps, while the pipe (metal tube) for the gas canister subjected to the press working is rotated and the press rollers are pressed but not rotated against the rotating tube. To the contrary, as noted above in the present invention, the stay material is shaped without being rotated, while the punch rollers are rotated.

There is no teaching or suggestion to modify JP '120. In Nakane and Brown, the punches are not rotated either. Thus, the combination of cited references fails to suggest the invention according to amended claim 1.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)
U.S. Application No.: 10/626,739

Attorney Docket No.: Q76609

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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Date: May 9, 2008